

Jannis G. Stavrianopoulos et al.

Serial No. 07/967,646

Filed: October 28, 1992

Page 2 (Supplemental Amendment to Applicants' September 2, 1994  
Amendment Under 37 C.F.R. §1.116 - October 28, 1994)

**In The Claims:**

Cancel claims 27-47 without prejudice or disclaimer to Applicants' right to pursue the subject matter of these claims in a duly filed continuation or divisional application.

Add new claims 48-68 as follows:

-- 48. (New) A system for detecting an oligo- or polynucleotide sequence of interest which comprises:

(i) an oligonucleotide or polynucleotide capable of hybridizing to said oligo- or polynucleotide sequence of interest and comprising a label that comprises a signalling moiety capable of generating a soluble signal; and

(ii) a solid support capable of directly or indirectly fixing or immobilizing said oligo- or polynucleotide sequence of interest or said oligonucleotide or polynucleotide;

wherein said system is transparent non-porous or translucent non-porous. --

-- 49. (New) The system according to claim 48 wherein said solid support is contained within said transparent non-porous or translucent non-porous system. --

-- 50. (New) The according to claim 48 wherein the solid support is porous or non-porous. --

-- 51. (New) The system according to claim 50 wherein said solid support is selected from the group consisting of glass, plastic, polystyrene, dextran and polypropylene. --

**Enz-7(C2)(P)(C2)**

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-- 52. (New) The system according to claim 48 wherein said system comprises a member selected from the group consisting of a well or microtitre well, a tube, a cuvette and an apparatus that comprises a plurality of wells or microtitre wells, tubes or cuvettes. --

-- 53. (New) The system according to claim 48 wherein said solid support and said system are composed of the same materials. --

-- 54. (New) The system according to claim 48 wherein said solid support and said system are composed of different materials. --

-- 55. (New) The system according to claim 48 wherein said solid support is capable of indirectly fixing or immobilizing the oligo- or polynucleotide sequence of interest. --

-- 56. (New) The system according to claim 55 wherein said oligo- or polynucleotide sequence of interest is indirectly fixed or immobilized to the solid support through the hybridization of a complementary oligo- or polynucleotide sequence. --

-- 57. (New) The system according to claim 48 wherein said solid support is capable of indirectly fixing or immobilizing the oligonucleotide or polynucleotide. --

-- 58. (New) The system according to claim 48 wherein said label is the signalling moiety. --

-- 59. (New) The system according to claim 58 wherein said label is directly or indirectly attached to the oligonucleotide or polynucleotide. --

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-- 60. (New) The system according to claim 59 wherein said label is indirectly attached to the oligonucleotide or polynucleotide through the formation of a complex. --

-- 61. (New) The system according to claim 60 wherein said complex is selected from the group consisting of biotin and avidin, biotin and streptavidin, a sugar and a lectin, and an antigen and an antibody. --

-- 62. (New) The system according to claim 48 wherein said label is indirectly attached to the oligonucleotide or polynucleotide --

-- 63. (New) The system according to claim 62 wherein said label is indirectly attached to the oligonucleotide or polynucleotide through a bridging moiety. --

-- 64. (New) The system according to claim 62 wherein the signalling moiety of said label is indirectly or directly attached thereto. --

-- 65. (New) The system according to claim 48 wherein said signalling moiety is selected from the group consisting of an enzyme, a co-enzyme, a chelating agent, a chromagen, a fluorescent agent and a chemiluminescent agent. --

-- 66. (New) The system according to claim 48 wherein said soluble signal is generated from a chromagen, or by fluorescence or chemiluminescence. --

-- 67. (New) The system according to claim 65 wherein said soluble signal is indirectly generated by an enzyme or enzymatic reaction. --

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-- 68. (New) An apparatus comprising:

- 1) means for containing a solution or solutions and a transparent non-porous or translucent non-porous device comprising a solid support; and
- 2) means for forming a fixed or immobilized oligonucleotide or polynucleotide hybrid to said solid support, said hybrid comprising a label attached to said hybrid, said label further comprising a signalling moiety which is capable of generating a soluble signal; and
- 3) means for detecting a soluble signal. --

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